

ABSTRACT

The present invention relates to low dielectric materials essential for a semiconductor having high density and high performance of the next generation, particularly to a process for preparing a porous interlayer insulating film having low dielectric constant containing pores with a size of a few nanometers or less.

The present invention provides a process for preparing a porous wiring interlayer insulating film having very low dielectric constant for a semiconductor device comprising the steps of a) preparing a mixed complex of pore-forming organic molecules and a matrix resin, b) coating the mixed complex on a substrate, and c) heating the mixed complex to remove the organic molecules therefrom, thereby forming pores inside the complex.

The porous wiring interlayer insulating film having very low dielectric constant prepared according to the process of the present invention has reduced phase-separation, excellent processibility, isotropic structure and very small pores with a size of a few nanometers or less.